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| 10/579,917 | 05/19/2006 | Roger Pellenc | 0514-1227 | 9817 |
| 466 7590 01/28/2008 YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202 | | | EXAMINER TRAN, NGUYEN | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|-----------------|----------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/579,917 | PELLENC, ROGER | |
| | Examiner | Art Unit | |
| | Nguyen Tran | 2838 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>5/19/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-26 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 43, and 58-83 respectively of copending Application No. 10580155. Although the conflicting claims are not identical, they are not patentably distinct from each other because with respect to the electric tool having at least three distinct functional sub-units of claims 43 of U.S. Application No. 10580155, wherein the first sub-unit generating the mechanical operation of the tool... the second portable sub-unit is provided with a lithium-ion or lithium polymer battery formed by association of a series of cells, each cell comprising one element or a plurality of associated parallel elements, on the one hand, ... the third sub-unit comprises at least one electric supply source, the voltage and current of which are adapted to recharging the lithium-ion or lithium polymer battery. The three sub-units just as the three separate functional subassemblies of claim 1 in the instant application. Also in claims 59-83 in the copending application comprising... (i.e. microprocessor) just as in the claims 2-26 of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Please note, Applicant has the burden of disclosing each related application considered material to patentability under CRF 1.56, such as those noted herein, but not necessarily limited to those. Applicant also has the option of filing terminal disclaimers in each such application.

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the boxes 11, (14, 14'), 21, 16, 21', 9', 9, 15, 18, 17, 19, 18, 2, 4 in figure 3

are not label . Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 4, 6, 11-17 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-2, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claims 1-2, 6, 11, 13, 16, 17, 21 the phrase "for example" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claims 1, 21 the phrase "or the like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or the like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claims 1, 13-14 recites the limitation "on the one hand".

Claim 4 recites the limitation "of n identical, of n cells , the n modules".

Claim 12 recites the limitation "thanks to an analog electronic circuit for measurement of the current of the charge and discharge of the battery".

Claim 15 recites the limitation "not necessarily but".

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfeifer et al. (US 5929597).

Regarding claim 1: It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

However Pfeifer et al. discloses (**fig. 2-4**) portable self-contained electric power tool such as for example pruning shears, chainsaw, fruit collecting tool, lawnmower with wires, jackhammer or the like, comprising at least three separate functional subassemblies, namely a first subassembly forming an electrical actuator and generating the mechanical action of the tool, a second subassembly forming an electric energy source and comprising essentially a rechargeable electrochemical battery and a third subassembly forming a charger adapted to carry out controlled recharging of the battery, characterized in that:

the second subassembly (3) **12, 16** is portable by the operator and is constituted on the one hand by a lithium ion or lithium polymer electrochemical battery **13 (5)** formed by association of more than four cells (6) in series (**inside of 13**), each cell being comprised by one or several elements in parallel **fig. 3-4** and, on the other hand, by a command and control module (7) for the battery **40 (5)**, preferably in the form of an electronic device located in immediate adjacency to said battery **13 (5)** and ensuring over time and in a controlled manner a maximum capacity of the battery **13** and an optimum use of the tool **20**;

the first subassembly (2) (**inside of 20**) is subjected during its operation to control by a system (8) (**inside of figure 3-4**) of current limitation adapted to reserve the lithium ion or lithium polymer electrochemical battery **13 (5)** from which it draws energy;

the third subassembly (4) (**charger not shown, see Col. 3, lines 25**) consists at least in a source of electrical supply whose voltage and current are suitable to recharging the lithium ion or lithium polymer battery **13 (5)**.

Regarding claim 2: (**fig. 2-4**) electrical tool assembly according to claim 1, characterized in that the electronic control and command module (7) of the battery (5) of the second subassembly (3) is present in the form of an electronic card and comprises at least one digital processing unit (9), such as for example a microprocessor, a microcontroller, a digital signal processor, associated with a memory and with annexed circuits, adapted together to perform at least certain, and preferably all, of the following group of tasks comprised by:

management of the charge, management of the discharge, balancing the charge of each cell (6), evaluation and display of the capacity of the battery (5), protection in discharge of the battery (5) as to excess current during use of the tool, management of the tool during storage

phases, management of alarms, management and transmission of collected information, management of the diagnostics (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 3: (fig. 2-4) electrical tool assembly according to claim 2, characterized in that, for the accomplishment of the tasks of management of the charge, of management of the discharge, balancing of the charge of each cell (6), evaluation and display of the capacity of the battery (5), the command and control module (7) permanently uses the values of measurement of the voltage of each cell (6) comprising the battery (5) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 4: It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

However Pfeifer et al. discloses (fig. 2-4) electrical tool assembly according to claim 3, characterized in that, for a battery (5) formed of n cells (6) in series, the values of measurement of the voltage of each cell (6) are provided by an electronic acquisition channel (10) constituted principally of n identical analog modules (11), mounted respectively at the terminals of n cells (6) of the battery (5) and adapted to measure the voltage of the respectively corresponding cell (6), the values of voltage measured by each of the n modules (11) being then routed, one after the other, by means of at least one analog multiplexer (12) and after amplification by a suitable circuit (13) toward an analog/digital input converter (9') of the digital processing unit (9) forming a portion of the command and control module (7).

Regarding claim 5: the functional recitation that that the analog modules (11) for measurement of voltage perform respectively for each cell (6) a subtraction between the voltage

measured at its positive terminal and the voltage measured at its negative terminal, this by means of a differential electronic assembly with an operational amplifier (11') using resistances (11'') for resistive input elements has not been given patentable weight because it is narrative in form. In order to be given patentable weight, a functional recitation must be expressed as a "means" for performing the specified function, as set forth 35 U.S.C. 112,6th paragraph, and must be supported by recitation in the claim of sufficient structure to warrant the presence of the functional language. In re Fuller, 1929 C.D. 172; 388 OG. 279.

However Pfeifer et al. also discloses (**fig. 2-4**) electrical tool assembly according to claim 4, characterized in that the analog modules (11) for measurement of voltage perform respectively for each cell (6) a subtraction between the voltage measured at its positive terminal and the voltage measured at its negative terminal, this by means of a differential electronic assembly with an operational amplifier (11') using resistances (11'') for resistive input elements (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 6: (**fig. 2-4**) electrical tool assembly according to claim 5, characterized in that the electronic differential assembly with operational amplifier (11') of each voltage measuring module (11) comprises resistances or resistive input elements (11'') of an impedance of about or greater than 1 Mohm so as to obtain very low loss currents and for example less than 1/20000.sup.th per hour of the total capacity of the battery (5).

Regarding claim 7: (**fig. 2-4**) electrical tool assembly according to claim 3, characterized in that the values of measurement of the voltage of each cell (6) are delivered with a precision of measurement of at least 50 mV (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 8: (**fig. 2-4**) Electrical tool assembly according to claim 7,

characterized in that the precision of measurement of the voltage of at least 50 mV is obtained by calibration during production of the electronic card of the command and control module of the battery (7) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 9: (fig. 2-4) Electrical tool assembly according to claim 8, characterized in that the calibration during manufacture of the electronic card consists in introducing by programming into the digital processing unit (9), for each module of voltage measurement (11), parameters for correcting errors as a function of the measurement of one or several very precise reference voltages, that are substituted for this calibrating operation for the normal voltages measured at the terminals of each cell (6) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 10: (fig. 2-4) Electrical tool assembly according to claim 2, characterized in that the task of balancing the charge of the cells (6) relative to each other is managed by the digital processing unit (9) which controls based on the values of measurement of voltage of each cell (6), and if necessary for each of them, the development of the charge current by means of dissipater circuits based on electronic switches (14) associated with resistive elements (14') (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 11: (fig. 2-4) Electrical tool assembly according to claim 2, characterized in that the task of managing the discharge consists in continuously scrutinizing the voltage data of each cell (6) by means of the digital processing unit (9), in interrupting the discharge when the latter detects that one of the voltages of the cell (6) has reached the minimum discharge threshold set by the producer of lithium ion or lithium polymer elements and in cutting the discharge by deactivating a switching component (15) of the discharge, thereby leading to

stopping the tool (2) and by activating, for example, a sonic or visual alarm (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 12: (fig. 2-4) Electrical tool assembly according to claim 3, characterized in that the tasks of managing the charge, of evaluating and displaying the capacity of the battery (5) and of protection from over-voltage during discharge, are managed continuously by the digital processing unit (9) thanks to an analog electronic circuit (16) for measurement of the current of the charge and discharge of the battery (15) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 13: (fig. 2-4) Electrical tool assembly according to claim 12, characterized in that during the task of managing the charge, whilst the third subassembly forming a charger (4) is connected to the second subassembly (3) at the electronic card of the command and control module (7) of the battery (5), the end of the charge is obtained by opening the switching component of the charge (17) which is controlled by the digital processing unit (9) when, on the one hand, said unit (9) detects by means of the digital electronic circuit (16) for measuring the charge and discharge current, a drop in the charge current to a predetermined threshold, for example 50 mA, for the battery (5) or that, on the other hand, the temperature of the battery (5) exceeds a permitted limit value, for example 55.degree. C., or else that the charging is prolonged during a time greater than a given fraction of the theoretical charge time, for example about 20% (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 14: (fig. 2-4) Electrical tool assembly according to claim 12, characterized in that the task of evaluation and display of the capacity of the battery (5) is managed by the digital processing unit (9), this latter computing said capacity by taking into

account continuously, during charge and during use of the tool, on the one hand, information as to the instantaneous current of the charge and discharge of the battery (5) delivered by the analog electronic circuit for measuring the current of charge and discharge (16) and, on the other hand, the values of measurement of voltage of each cell (6) and, not necessarily but for more précise computation, their known mean internal resistance (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 15: (fig. 2-4) Electrical tool assembly according to claim 2, characterized in that the task of protection from over-current during the discharge of the battery (5) during use of the tool, adapted to preserve the lithium ion or lithium polymer battery from premature aging or from exaggerated heating, consists either in cutting the discharge current in the case of very large impulsional exceeding of the maximum discharge current for the battery (5) or by exceeding the maximum limit temperature permitted for this latter, or by limiting the discharge current as a function of the energy consumed by the tool during a certain running time, given that the value of the energy of the running time is predetermined experimentally as a function of the tool, of its use and of the desired lifetime for the lithium ion or lithium polymer battery (5) forming a portion of the second subassembly (3) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 16: (fig. 2-4) Electrical tool assembly according to claim 15, characterized in that the limitation of discharge current is managed by the unit (9) for digital processing by applying a command for modulation of impulse width (MLI), generated either directly by said unit (9), or by a specialized component, or by means of a piloting stage (18), with a switching component of the discharge (15) provided for example in the form of a

component of the MOSFET channel N type (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 17: (fig. 2-4) Electrical tool assembly according to claim 2, characterized in that, when it is not charging and has not been used for a predetermined period, for example 10 days, the digital processing unit (9) automatically performs a task of management of storage which consists in verifying whether the residual capacity of the battery (5) is greater or not than the storage capacity predetermined by the manufacturer or lithium ion or lithium polymer elements and, if the residual capacity is substantially superior to the storage capacity, in triggering by the digital processing unit (9) an automatic discharge of the battery with the help of resistive circuits (14, 14') connected in parallel with each cell (6), this until the storage capacity is reached, and then stopping all the electronic circuits whilst placing the processing unit (9) is standby in low consumption mode and, if the capacity is below the storage capacity, in triggering by the digital processing unit (9) a sonic and/or visual alarm (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 18: It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

(fig. 2-4) Electrical tool assembly according to claim 2, characterized in that the digital processing unit (9) is adapted to detect the connection of the charger (4) under voltage to the battery (5) by means of a voltage measurement by the command and control module (7) at least one of the terminals (20) of the second subassembly (3) adapted to be connected to said charger (4) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 19: (fig. 2-4) Electrical tool assembly according to claim 18, characterized in that the function of detection of the connection of the charger (4) under voltage to the battery (5) is carried out by means of a particular suitable measuring circuit (19), permitting, while the tool is stored in non-use phase, by detecting the instant at which at least one cell (6) achieves the minimum voltage set by the manufacturer, thereby to trigger an automatic recharge of the battery (5) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 20: (fig. 2-4) Electrical tool assembly according to claim 18, characterized in that when the command and control module (7) detects an excessive or insufficient voltage of the charger (4) at the corresponding connection terminals (20) of the second subassembly (3), the digital processing unit (9) which uses this information commands the stopping of charging and triggers a sonic and/or visual alarm (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 21: (fig. 2-4) Electrical tool assembly according to claim 2, characterized in that the task of managing the information and diagnostics consists in storing in the memory of the digital process unit (9) information acquired during the use of the tool such as for example: the number of recharges, the total of the hours of use of the tool, the development of the capacity of the battery (5) with time, the mean energy consumed by the tool or the like, this information being adapted to be transmitted by means of a wire connection (23), radio frequency or infrared toward a separate exploitation terminal, for example of the personal computer type, electronic personal assistant, GSM, being if desired connected to the Internet (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 21: (fig. 2-4) Electrical tool assembly according to claim 2,

characterized in that the command and control module (7) of the battery (5) forming a portion of the second subassembly (3) forming a source of rechargeable electrical energy is associated with the electronic command and control module of the actuator (2) on the same electronic card, as the case may be with the use of the same digital processing unit (9) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 23: (fig. 2-4) Electrical tool assembly according to claim 1, characterized in that the electronic command and control module (7) of the battery (5) comprises for each cell (6) redundant security circuits for stopping charging (21), adapted to control each individually, in case of over-voltage of a cell (6), the general stopping of the charge by deactivating directly a switching component (17) for the charge without disturbing the digital processing unit (9) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 24: It has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

(fig. 2-4) Electrical tool assembly according to claim 12, characterized in that the electronic command and control module (7) comprises a redundant circuit for stopping discharge (21'), adapted to control the stopping of discharge in the case of detection of a discharge current equal to or greater than a maximum admissible value for the battery (5) by the analog electronic measuring circuit (16), by directly deactivating the switching component (15) of the discharge without disturbing the digital processing unit (9) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 25: Electrical tool assembly according to claim 1, characterized in that

the third subassembly (4) forming a charger adapted to recharge the lithium ion or lithium polymer battery (5) generates a voltage with a precision of about 0.5% and a regulated current, obtained by means of a specialized circuit for regulation of voltage and current (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Regarding claim 26: (fig. 2-4) Electrical tool assembly according to claim 1, characterized in that each functional subassembly (2, 3 and 4) is mounted in a protective housing and/or a grippable housing, which can be connected together two by two by flexible disconnectable cables (22, 22') for the transfer of energy and the transmission of command and/or control signals between said subassemblies (2, 3, 4) (Col. 3, lines 13-26; Col. 4, lines 13-30 and Col. 5, lines 5-15).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen Tran whose telephone number is 571-270-1269. The examiner can normally be reached on M-F 7:30-5:00, OFF every other Friday.

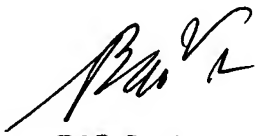
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ullah Akm can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Art Unit: 2838

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NT



BAO Q. VU
PRIMARY EXAMINER